

## AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. The following listing provides the amended claims with deleted material crossed out and new material underlined to show the changes made.

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### **Listing of Claims:**

Claims 1-28 previously canceled.

29. (Currently Amended) ~~A composition comprising GnRH and Kiss-1 peptide, Kiss-1 peptide fragments, kisspeptins, or salt thereof.~~

A composition comprising:

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a) GnRH; and

b) at least one of Kiss-1 peptides, Kiss-1 peptide fragments, kisspeptins, a salt of Kiss-1 peptides, a salt of Kiss-1 peptide fragments, and a salt of kisspeptins.

30. (Currently Amended) ~~A composition according to claim 29, wherein the Kiss-1 peptide fragment is the fragment 45-54 of Kiss-1.~~

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The composition of claim 29, wherein at least one of said Kiss-1 peptide fragments is fragment 45-54 of a Kiss-1 peptide.

31. (Currently Amended) ~~A composition according to claims 29 or 30, wherein the ratio of the GnRH to Kiss-1 peptide, Kiss-1 peptide fragments, kisspeptins, or salt thereof, is in the range 10:1 to 1000:1 in Molar concentration.~~

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The composition of claim 29 or 30, wherein a ratio of said GnRH to at least one of said Kiss-1 peptides, said Kiss-1 peptide fragments, said kisspeptins, said salt of Kiss-1 peptides, said salt of Kiss-1 peptide fragments, and said salt of kisspeptins comprises between 10:1 and 1000:1 in Molar concentration.

32. (Currently Amended) ~~The composition according to any of one of the claims 29 to 31 for its therapeutic use in the treatment of a gonadotropin related reproductive disorder.~~

A method for treatment of a gonadotropin related reproductive disorder comprising administering a composition comprising GnRH and at least one of Kiss-1 peptides, Kiss-1 peptide fragments, kisspeptins, a salt of Kiss-1 peptides, a salt of Kiss-1 peptide fragments, and a salt of kisspeptins.

33. (Currently Amended) ~~The composition according to claim 32 wherein the therapeutic use is the treatment of LH and/or FSH related disorders.~~

The method of claim 32, wherein said administration is for treatment of at least one of LH related disorders and FSH related disorders.

34. (Currently Amended) ~~The composition according to claim 32 wherein the therapeutic use is the stimulation of ovulation.~~

The method of claim 32, wherein said administration is for stimulation of ovulation.

35. (Currently Amended) ~~The composition according to claim 32 wherein the therapeutic use is to positively modulate LH synthesis.~~

The method of claim 32, wherein said administration is for positive modulation of LH synthesis.

36. (Currently Amended) ~~Kiss-1 peptide, Kiss-1 peptide fragments, kisspeptins, or salt thereof for the use as an addition to a treatment for the stimulation of ovulation by GnRH.~~

20 A method for stimulation of ovulation comprising administering a composition comprising GnRH and at least one of Kiss-1 peptides, Kiss-1 peptide fragments, kisspeptins, a salt of Kiss-1 peptides, a salt of Kiss-1 peptide fragments, and a salt of kisspeptins.

37. (Currently Amended) ~~Kiss-1 peptide, Kiss-1 peptide fragments, kisspeptins, or salt thereof for the use according to claim 36 wherein the Kiss-1 peptide, Kiss-1 peptide~~

~~fragments, kisspeptins, or salt thereof positively modulates the GnRH effect on LH synthesis stimulation.~~

The method of claim 36, wherein at least one of said Kiss-1 peptides, said Kiss-1 peptide fragments, said kisspeptins, said salt of Kiss-1 peptides, said salt of Kiss-1 peptide fragments, and said salt of kisspeptins positively modulates the effect of GnRH on LH synthesis stimulation.

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The method of claim 36 or 37, wherein at least one of said Kiss-1 peptide fragments is fragment 45-54 of a Kiss-1 peptide.

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15      The method of claim 36 and 37, wherein the ratio of said GnRH to at least one of said Kiss-1 peptides, said Kiss-1 peptide fragments, said kisspeptins, said salt of Kiss-1 peptides, said salt of Kiss-1 peptide fragments, and said salt of kisspeptins comprises between 10:1 and 1000:1 in Molar concentration.

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41. (New) The method of claim 32, wherein at least one of said Kiss-1 peptide fragments is fragment 45-54 of a Kiss-1 peptide.

42. (New) The method of claim 41, wherein said administration is for treatment of at least one of LH related disorders and FSH related disorders.
43. (New) The method of claim 41, wherein said administration is for stimulation of ovulation.
- 5 44. (New) The method of claim 41, wherein said administration is for positive modulation of LH synthesis.
45. (New) The method of claim 32, wherein a ratio of said GnRH to at least one of said Kiss-1 peptides, said Kiss-1 peptide fragments, said kisspeptins, said salt of Kiss-1 peptides, said salt of Kiss-1 peptide fragments, and said salt of kisspeptins comprises between 10:1 and 10 1000:1 in Molar concentration.
46. (New) The method of claim 45, wherein said administration is for treatment of at least one of LH related disorders and FSH related disorders.
47. (New) The method of claim 45, wherein said administration is for stimulation of ovulation.
- 15 48. (New) The method of claim 45, wherein said administration is for positive modulation of LH synthesis.
49. (New) The method of claim 45, wherein at least one of said Kiss-1 peptide fragments is fragment 45-54 of a Kiss-1 peptide.
50. (New) The method of claim 49, wherein said administration is for treatment of at 20 least one of LH related disorders and FSH related disorders.
51. (New) The method of claim 49, wherein said administration is for stimulation of ovulation.
52. (New) The method of claim 49, wherein said administration is for positive modulation of LH synthesis.